

Notice of Allowability

Application No.

10/517,231

Examiner

Chukwuma O. Nwaonicha

Applicant(s)

WOLF ET AL.

Art Unit

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/16/06.
2. ☒ The allowed claim(s) is/are 3 and 8 (now renumbered 1 and 2, respectively).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER-1600

DETAILED ACTION

Current Status

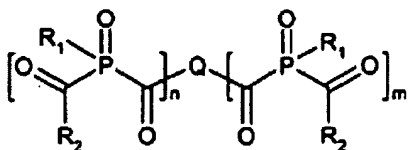
1. This action is responsive to applicants' amendment of 16 October 2006.
2. Receipt and entry of Applicants' amendment is acknowledged.
3. Claims 3 and 8 are pending in the application.
4. Applicants have amended the claims to overcome the 102 and 103 rejections.

Allowed Claims

Claims 3 and 8 are allowable over the prior art of record.

Reason For Allowance

The following is an examiner's statement of reasons for allowance: Applicants claim a process for the preparation of the compound of the general formula 1; wherein all the variables are as defined in claims. The process was neither found to be obvious nor anticipated by the prior art of record.

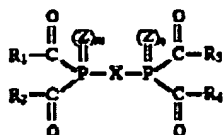


Formula 1

The closest prior arts are Leppard et al., {US 5,723,512} and Wolf et al., {US 6,399,805}. Leppard et al. teach a process for preparing the compound of general formula 2. The process comprised double acylation of phosphine compound $\text{H}_2\text{P-X-PH}_2$ with at least 4 equivalents of a base, followed by oxidation of the dimeric phosphine to

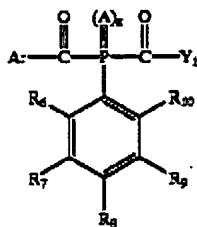
Art Unit: 1621

give the corresponding phosphine oxide of formula 2, wherein X is phenyl group and the other variables are as defined in the claims. See columns 13, 14 and 33-38.

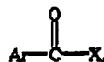


Formula 2

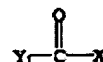
On the other hand, Wolf et al. teach a process for preparing the compound of general formula 3, wherein the variables are as defined in the claims. See claims 4 and 5. The process comprised acyl halide of formula 4 with dimetalated-aryl in a 1:1 molar ratio, followed by the reaction with acyl halide of formula 5 before the oxidation step.



Formula 3



Formula 4



Formula 5

Applicants process for the preparation of the compound of the general formula 1 differ from Leppard et al. process in that applicants claim a process that employs dimetalated-phosphine while Leppard et al. teach a process for that employed different phosphine compound ($H_2P-X-PH_2$). Additionally, the compound of formula 1 differs from that of formula 2. On the other hand, Applicants process for the preparation of the compound of the general formula 1 differ from Wolf et al. process in that applicants claim a process that employs di- or polycarboxylic acid halogenide while Wolf et al. teach a process for that employed a different carboxylic acid halogenide (a

Art Unit: 1621

monocarboxylic acid halogenide), and a two-step synthesis. These differences are not readily apparent and would not have been suggested to one of ordinary skill.

All claims (3 and 8) are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman k. Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.


Application/Control Number: 10/517,231

Page 5

Art Unit: 1621

Patent Examiner

Art Unit: 1621


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